

[illegible]

**Fig. 46A**



DHBV-S31 M32991	K	Y	R	G	R	D	A	P	T	I	E	A	I	T	R	P	I	Q	V	A	Q	G	G	R	K	T	S	S	G	T
HHBV M22056	K	Y	R	G	K	D	A	P	T	I	E	A	I	T	R	P	I	Q	V	A	Q	G	G	R	N	Q	T	K	G	T
DHBV NC_001344	K	Y	R	G	R	D	A	P	T	I	E	A	I	T	R	P	I	Q	V	A	Q	G	G	R	K	T	S	S	G	T
HBV ayw X65257	A	Y	R	P	P	N	A	P	I	L	S	T	L	P	E	T	T	V	V	R	R	R	G	-	-	-	-	-	-	-
Chimp.HBV AF222323	A	Y	R	P	P	N	A	P	I	L	S	T	L	P	E	T	T	V	V	R	R	R	G	-	-	-	-	-	-	-
Gibbon HBV AY077735	A	Y	R	P	P	N	A	P	I	L	S	T	L	P	E	T	T	V	V	R	R	R	G	-	-	-	-	-	-	-
Ross'gooseHBV M95589	K	Y	R	G	K	D	A	P	T	I	E	A	I	T	R	P	I	Q	V	A	Q	G	G	R	N	K	T	Q	G	V
Orangutan HV NC_002168	A	Y	R	P	P	N	A	P	I	L	S	T	L	P	E	T	T	V	V	R	R	R	G	-	-	-	-	-	-	-
WMHBV AF046996	A	Y	R	P	P	N	A	P	I	L	S	T	L	P	E	T	T	V	V	R	R	R	G	-	-	-	-	-	-	-
GSHV K02715	P	Y	R	P	P	N	A	P	I	L	S	T	L	P	E	H	T	V	I	R	R	R	G	G	-	-	S	R	A	A
WHV J02442	P	Y	R	P	P	N	A	P	I	L	S	T	L	P	E	H	T	V	I	R	R	R	G	G	-	-	S	R	A	S
AGSH NC_001719	P	Y	R	P	P	N	A	P	I	L	S	T	L	P	E	H	T	V	I	R	R	R	G	G	-	-	S	R	V	V
	Y	R	P	P	N	A	P	I	L	S	T	L	P	E	T	T	V	V	R	R	R	G	-	-	-	-	-	-	-	-

  

DHBV-S31 M32991	R	K	P	R	G	L	E	P	R	R	R	K	V	K	T	T	F	V	Y	G	R	R	R	S	K	S	R	E	R	R
HHBV M22056	R	K	P	R	G	L	E	P	R	R	R	K	V	K	T	T	V	V	Y	G	R	R	R	S	K	S	R	E	R	R
DHBV NC_001344	R	K	P	R	G	L	E	P	R	R	R	K	V	K	T	T	V	V	Y	G	R	R	R	S	K	S	R	E	R	R
HBV ayw X65257	R	S	P	R	R	R	T	P	S	P	R	-	-	-	-	-	-	-	-	-	R	R	R	S	Q	S	P	R	R	R
Chimp.HBV AF222323	R	S	P	R	R	R	T	P	S	P	R	-	-	-	-	-	-	-	-	-	R	R	R	S	Q	S	P	R	R	R
Gibbon HBV AY077735	R	S	P	R	R	R	T	P	S	P	R	-	-	-	-	-	-	-	-	-	R	R	R	S	Q	S	P	R	R	R
Ross'gooseHBV M95589	R	K	S	R	G	L	E	P	R	R	R	R	V	K	T	T	I	V	Y	G	R	R	R	S	K	S	R	E	R	R
Orangutan HV NC_002168	R	S	P	R	R	R	T	P	S	P	R	-	-	-	-	-	-	-	-	-	R	R	R	S	Q	S	P	R	R	R
WMHBV AF046996	R	P	S	R	G	L	E	P	R	R	R	-	-	-	-	-	-	-	-	-	R	R	R	S	Q	S	P	R	R	R
GSHV K02715	R	S	P	R	R	R	T	P	S	P	R	-	-	-	-	-	-	-	-	-	R	R	R	S	Q	S	P	R	R	R
WHV J02442	R	S	P	R	R	R	T	P	S	P	R	-	-	-	-	-	-	-	-	-	R	R	R	S	Q	S	P	R	R	R
AGSH NC_001719	R	S	P	R	R	R	T	P	S	P	R	-	-	-	-	-	-	-	-	-	R	R	R	S	Q	S	P	R	R	R
	R	S	P	R	R	R	T	P	S	P	R	-	-	-	-	-	-	-	-	-	R	R	R	S	Q	S	P	R	R	R

  

DHBV-S31 M32991	A	P	S	P	Q	R	A	G	S	P	L	P	R	S	S	S	S	H	R	S	P	S	P	S	P	R	K			
HHBV M22056	S	P	S	Q	R	A	G	S	P	L	P	R	N	R	G	N	Q	T	R	S	P	S	P	S	P	R	E			
DHBV NC_001344	A	P	S	P	Q	R	A	G	S	P	L	P	R	S	S	S	S	H	R	S	P	S	P	S	P	R	E			
HBV ayw X65257	R	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	S	Q	S	P	S	P	S	Q	C			
Chimp.HBV AF222323	R	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	S	Q	S	P	S	P	S	Q	C			
Gibbon HBV AY077735	R	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	S	Q	S	P	S	P	S	Q	C			
Ross'gooseHBV M95589	A	P	T	P	Q	R	A	G	S	P	L	P	R	T	S	R	D	H	R	S	P	S	P	S	P	R	E			
Orangutan HV NC_002168	R	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	S	Q	S	P	S	P	S	Q	C			
WMHBV AF046996	R	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	S	Q	S	P	S	P	S	Q	C			
GSHV K02715	R	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	S	Q	S	P	S	P	S	Q	C			
WHV J02442	R	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	S	Q	S	P	S	P	S	Q	C			
AGSH NC_001719	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	Q	S	P	S	P	S	Q	C			
	R	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	S	Q	S	P	S	P	S	Q	C			

Fig. 46C